AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Withdrawn) A method of cell analysis comprising detecting presence of a mutant Plk protein in a cell, the mutant Plk protein having at least one of S487G, P509S, N496S and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.

2. (Withdrawn)The method according to claim 1 wherein the cell is a malignant cell.

3. (Withdrawn) The method according to claim 1 wherein the cell is a malignant tumor cell.

4. (Withdrawn)A method for diagnosing a malignant tumor which comprises detecting presence of a mutant Plk protein in a tumor sample, the mutant Plk protein having at least one of S487G, P509S, N496S and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.

5. (Withdrawn) A method of detecting presence in a cell of mutant Plk protein which promotes oncogenesis comprising analyzing a biological sample for presence of mutant Plk protein, the mutant Plk protein having at least one of S487G, P509S, N496S and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.

6. (Withdrawn) The method according to claim 5 wherein the cell is a malignant cell.

7. (Withdrawn) The method according to claim 5 wherein the cell is a malignant tumor cell.

8. (Currently Amended) A method of cell analysis for determining an increased likelihood of malignancy comprising:

detecting presence of a mutant Plk nucleotide sequence encoding a mutant Plk protein in a cell in which the wild type cell expresses a wild type Plk protein, the mutant Plk protein having at least one of S487G, P509S, N496S, and R512W mutation in C-terminal domain of wild-type Plk protein,

wherein the mutation decreases affinity with Hsp90 protein,

wherein the presence of the mutant Plk protein indicates an increased likelihood of malignancy.

9. (Original) The method according to claim 8 wherein the cell is a malignant cell.

10. (Original) The method according to claim 8 wherein the cell is a malignant tumor cell.

11. (Currently Amended) A method of diagnosis ~~for diagnosing a malignant tumor~~ for determining an increased likelihood of the presence of malignant tumor cells which comprises detecting presence of the mutant Plk nucleotide sequence encoding a mutant Plk protein in a tumor sample, the mutant Plk protein having at least one of S487G, P509S, N496S, and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein,

and wherein presence of the mutant Plk nucleotide sequence indicates increased likelihood of presence of malignant tumor cells.

12. (Currently Amended) A method of detecting presence in a cell of mutant Plk nucleotide sequence encoding a mutant Plk protein which promotes oncogenesis comprising analyzing a biological sample for presence of the mutant Plk nucleotide sequence, the mutant Plk

protein having at least one of S487G, P509S, N496S, and R512W mutation in C-terminal domain of wild-type Plk protein, wherein the mutation decreases affinity with Hsp90 protein.

13. (Original) The method according to claim 12 wherein the malignant cell is a malignant cell.

14. (Original) The method according to claim 12 wherein the malignant cell is a malignant tumor cell.